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TREND OF CAFFEINE CONSUMPTION AMONG SOUTH INDIAN MEDICAL STUDENTS

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ABSTRACT

BACKGROUND: Caffeine is regularly utilized for its advantages, which incorporate expanded watchfulness. It has reactions, nonetheless, for example, palpitations and withdrawal indications that incorporate migraines and languor. Tertiary instruction frequently expects understudies to read for broadened hours, particularly during times of expanded remaining task at hand preceding tests and assessments. Medicinal understudies, who need to ace an extremely enormous volume of scholastic work in a constrained timeframe, are no special case. This examination was led to decide the pattern of caffeine utilization among medicinal understudies and furthermore the reactions related with it. **METHODOLOGY:** It is a cross-sectional study. The present examination was directed among third year M.B.B.S understudies at slim's, Pondicherry. Around 100 restorative understudies took an interest in the investigation. A concise early on introduction was given to understudies about the method of reasoning and organization of the investigation. The information was gathered independent from anyone else evaluation poll accessible in English. **RESULT:** The examination demonstrated that lion's share of restorative understudies where low customers of caffeine during standard days though during test days the measure of utilization moves more towards moderate admission class. Commonest reason and situation behind caffeine admission was to battle laziness and keep them progressively aware and of concentrate for test. The manifestation they confronted frequently was loss of rest and during test days, different CNS related impacts were likewise noted. **CONCLUSION:** The frequency of caffeine use among medical students increases during exam days while it remains moderate to low on regular days and them most common side effect associated with such intake was found to be nervousness and loss of sleep.

Key words: Caffeine, Medical Students, Side effects.

INTRODUCTION

Human interest has lead route for the disclosure of espresso around 850AD by Goatherder Name Khaldi in Abyssinia situated in Upper Egypt. Through the ages the pleasure look for stimulants has been remunerated by the revelation of espresso bean (*Coffea arabica*) in Arabia, the tea leaf (*Thea sineusis*) in China, the Kola nut (*Theobromo cocoa*) in Mexico and other plant wellspring of

caffeine[1]. Over 120000 tons of caffeine is devoured every year universally, that adds up to 70mg per occupant every day. There have been in excess of 19,000 investigations on caffeine and espresso in the previous 30 years, the greater part of which have expected to reveal the medication's careful consequences for the human body[2].

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Caffeine is utilized by over 80% of the total populace. Caffeine is a focal sensory system stimulant having a place with the gathering of xanthines[3]. Around 90% of the caffeine contained in some espresso is cleared from the stomach inside 20 minutes after oral ingestion, with its belongings initiating inside an hour and going on for three to four hours[4]. The pinnacle plasma focus is come to after around 40–60 minutes[5], with a half-existence of roughly six hours in solid adults[6].

The half-life is shorter in smokers and longer in pregnant ladies and ladies taking oral contraceptives. Caffeine is the broadly utilized pharmacologically dynamic substance in the world[7]. Caffeine is devoured in various structures, for example, tea, espresso, soda and caffeinated drinks. The boundless utilization of caffeine might be because of the way that its constant utilization has been altogether identified with expanded self-announced readiness, improved execution of watchfulness assignments and less passes of consideration, improved long haul memory and quicker locomotor speed[8,9]. Caffeine is accepted to lessen weakness, in this way improving presentation on errands like schoolwork, and playing sports. Studies have likewise proposed that caffeine is valuable in treating asthma and anticipating holes. Medicinal understudy's life starts with customary tests, interior test readiness and all through restorative course the understudies are exposed to over the top pressure, significantly because of restless working hours. Therapeutic understudies need to advance additional exertion past their psychological edge and physical worry to show advance in their tests. The utilization of charged beverages is one of the adapting methodologies utilized by restorative understudies to deal with their scholastic pressure. Caffeine causes high uneasiness level among moderate and abnormal state caffeine purchasers while the beneficial outcome of caffeine was appeared by low level customers like they decreased nervousness and raised the disposition.

METHODOLOGY

Study design

The investigation was directed among third year M.B.B.S understudies at SLIMS Hospital The example choice was done dependent on Inclusion and Exclusion criteria's.

Procedure

About 100 medical students participated in the study. Every one of the understudies who were happy to partake were incorporated into the investigation. The information was gathered without anyone else's input evaluation survey accessible in English. The taking an interest understudies were permitted to pose inquiries on issues those were hazy.

The poll was isolated in the accompanying way:

a) Questions 1-3: spoke to the statistic information area which incorporated the age and sex of the person

b) Questions 5: saw the measure of caffeine expended, in understanding to the quantity of cups devoured on specific days.

c) Questions 6-7: showed the reasons and conditions of caffeine admission and furthermore the manifestations. There were around 7 decisions for the reason of utilization and around 8 manifestations that the individual may understanding.

Data collection

The data was obtained from the questionnaire by convenient sampling method and recorded manually. The data collected was coded and entered in Microsoft Excel version 2007. The results were presented in the form of charts, tables and figures wherever necessary.

RESULTS

A total of 100 students participated in the study. The age ranged from 19 to 24 years with the mean age of 21 years. *FIGURE 1* tells us that among the 100 students about 48(47.5%) preferred coffee, 30(29.7%) preferred tea while remaining preferred either carbonated drinks or energy drinks.

Figure 1.

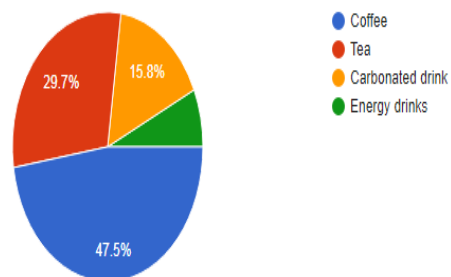


TABLE 1 shows on categorizing the students on the quantity of caffeine usage, majority of them i.e about 97 % of them were low consumers, and about 3% were moderate consumers, none were found to consume high amounts of caffeine on **routine days**. During **exam days** about 60% were low consumers, 33% were temperate consumers and 7% were elevated consumers.

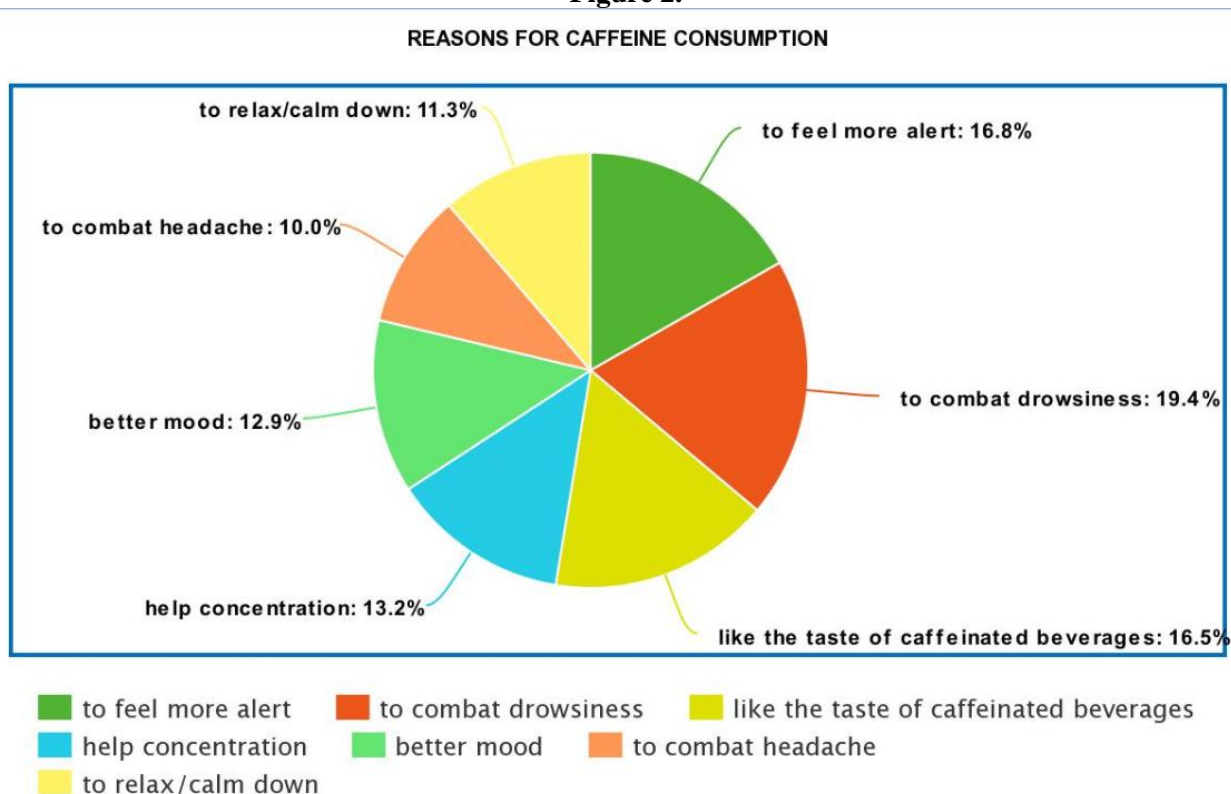
Table 1: Distribution of participants and level of caffeine consumption

Caffeine consumption category	Low consumption	Moderate consumption	High consumption
Consumption on regular days	97%	3%	0%
Consumption on Sunday/holiday	92%	8%	0%
Consumption on study holidays	74%	25%	1%
Consumption on exam days	60%	33%	7%

Reason behind caffeine consumption

FIGURE 2 shows that 16.8% of students used caffeine as they believed it makes them more alert and about 19.4% of students consumed caffeine to combat drowsiness. The smallest number of students assumed that caffeine helped them to combat headache i.e 10% of students.

Figure 2.



Side effects due to caffeine consumption

The outcomes demonstrated the different symptoms they looked during typical days and assessment days. The reactions incorporate : palpitation, gastritis, brevity of breath, apprehension, loss of rest, animosity, queasiness, expanded solid discharge.

(i)Normal days and customary occasions: the most widely recognized reactions looked by understudies due to caffeine admission was loss of rest around 29 understudies and gastritis around 22 understudies.

ii) During exam days and study holiday: more number of students i.e about 60 students experienced loss of sleep during exam days and study holiday, about 56 students experienced nervousness and 36 students experienced palpitations and 35 students experienced gastritis.

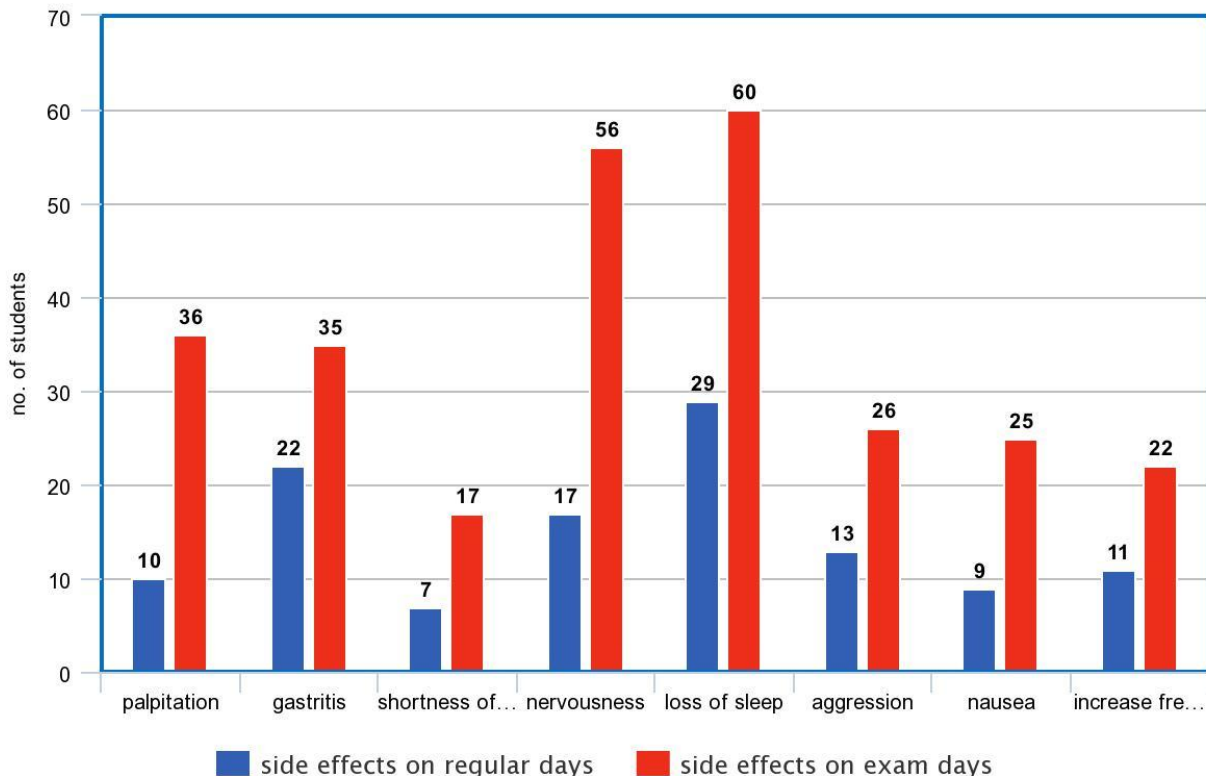
DISCUSSION

Age old show and our doubt has made use of coffee, tea, imperativeness dinks and soft drinks as a bit of our dinner structure, paying little mind to whether the usage help the dietary bit of leeway or escalate the presence state of individual is yet to be analyzed. The general nonattendance of research relating to the activity of juiced drinks on the ordinary activities among medicinal understudies is a zone that the ebb and flow paper will endeavor to inspect. In the present examination the caffeine use structure by restorative understudies were isolated into four sessions as: (a) usage on ordinary days (b) use on Sundays/holidays(c) use on study

occasions and (d) use during assessments. Contingent upon the amount of caffeine expended the U.S Food and Drug organization (FDA) and American Medical Association has classifications it into three extraordinary class (1) Low intake: utilization up to 199mg/d I.E 1 cup of any

caffeinated beverage/perday (2) Moderate intake: utilization of around 200-399mg/d I.E 2 cups of any caffeinated beverage/perday (3) High intake: utilization more than 400mg/Di.e 5 or more cups of any caffeinated beverage/perday.

Figure 3.



meta-chart.com

The present examination showed that larger piece of the students where in class I (low intakers) during the session of ordinary days and events. During session of study events and test days the understudies fell more into class II (moderate intakers) and few in class III (high intakers). Concentrate by Kaplan et al[13] showed that 250mg caffeine can cause bliss in strong volunteers and measurements more than 400mg/d can augment peevishness. Confirmations demonstrate that moderate dosages of caffeine impede engine aptitudes and may not be a sufficient substitute for memory improvement or to alleviate sleep[14]. High caffeine clients are presented to reduce supplement ingestion and a moderate pace of fluid ingestion. The present investigation demonstrated that the fundamental explanation for caffeine utilization among understudies was to enable them to battle languor (59.4%) and to feel progressively caution (51.5%)Caffeine has an extraordinary property of expanding the neurotransmission of mesopontine cholinergic neurons in this way expanding sharpness and lessening exhaustion.

In the present investigation the customary condition for usage of caffeine among medicinal understudies was during tests and to battle tiredness . The ordinarily open drinks are coffee, tea, or arranged to have stimulated refreshments like coco cola, pepsi.etc with caffeine as standard fixing. The social circumstance and confined profitable advancing has involved us towards the usage of animated refreshments surrendering the impressions of various dangers in the prosperity of individuals. The customary indications displayed were loss of rest during standard days which certainly raised during test days. As the signs "loss of rest" was shown during both conventional days and test days, test related weight can't be the substantiating clarification for the previously mentioned reactions. The assessment finding is like the examination by Dr Shree laxmidevi et al10 which showed the responses related with caffeine use among therapeutic understudies. Hicks et al11 concentrate showed that caffeine diminishes rest length. Caffeine impelled lack of sleep was suggested as research model for insomnia.The

various indications which bested during assessment days were tension, palpitation and disorder.

From the investigation these side effects are decidedly connected to the expanded recurrence of caffeine utilization during test days and to a more prominent degree can likewise be identified with examination related pressure high admission of caffeine can prompt a condition called as "caffeinism". Concentrate by Lara et al demonstrated that side effects like tension, apprehension, dysphoria, anxiety, tumult, drifting of contemplations and discourse brought about by caffeine admission are considered to impersonate the clinical highlights of "mixed mood state"[14].

CONCLUSION

The present investigation demonstrated that utilization of caffeine among therapeutic understudies was for the most part to maintain them alert in control to battle

substantial working hours and laziness. The restorative understudies were low shoppers of caffeine on standard days. While during the preliminary days utilization of caffeine extended from moderate to high class. The most widely recognized reaction or indication the therapeutic understudies looked because of caffeine utilization on both customary days just as test days was loss of rest. Though the high purchasers speak to a little rate they should attempt to limit the day by day caffeine use and they ought to be advised suitably with respect to the symptoms of caffeine utilization.

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CONFLICT OF INTEREST: None

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